

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-024156**Date Inspected:** 30-Jun-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC) Chanxing Island**Location:** Shanghai, China**CWI Name:** Mr. Shi Lei**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Segment**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance Inspector (QA), Vibin Kumar Selvanayaham, was present during the times noted above for observations relative to the work being performed.

Ultrasonic Testing (UT) – NWIT Document No: 009301

This QA inspector performed UT of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an UT report for this date. The members are identified as OBG Segment 13AW. The weld designations reviewed are as follows:

1. SEG3013E- 054, 049,044,039,036,046,114,109,094,089,079
2. SEG3013E- 061,064,069,076,081,086,091,096,102,106, 111
3. SEG3013E- 115,110,100,095,090,085,070,065,040,045,116
4. SEG3013E- 119,120,309,308,121,126,131,136,124,125,129
5. SEG3013E- 130,134,135,139,140,290,286,284

Description of Incident: During the Quality Assurance Ultrasonic Testing (UT) verification of weld located on OBG Segment 13AW, this Quality Assurance Inspector (QA) discovered the following issue:

- A total of two (2) Class "A" indications measuring approximately 15-20mm in length.
- The Indication rating is +7dB and length approximately 15mm.
- The Thickness of the plate is 22mm and depth of the indication approximately 10mm.

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- The indication is located on the weld joint identified as SEG3013G-091.
- The “Y” location for this indication is approximately 70mm from top edge of this I - Stiffener.
- The weld is a Complete Joint Penetration (CJP) “T” weld joint joining Side Plate (SP3091E) I - Stiffener to Floor Beam (FB3193A) at panel point 119+1500.
- The Indication rating is +5dB and length approximately 20mm.
- The Thickness of the plate is 28mm and depth of the indication approximately 10mm.
- The indication is located on the weld joint identified as SEG3013E-041.
- The “Y” location for this indication is approximately 180mm from top edge of this I - Stiffener.
- The weld is a Complete Joint Penetration (CJP) butt weld joint joining Bottom Plate (BP3056A) I - Stiffener to I - Stiffener at panel point 119.65.
- The indications are clearly marked by QA near the weld.
- OBG Segment 13AW is located in North Side of OBG Trial Assembly Yard.
- The Notice of Witness Inspection Number (NWIT) is 009301. The indication is located within the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC’s QC personnel are required to perform 100% UT inspection of this weld.
- See the attached pictures

OBG Trial Assembly Yard

This QA Inspector observed the following work in progress:

Flux Core Arc Welding (FCAW) welding of weld joint SEG3015V-033 and 034 located on Side plate to RS stiffener at panel point 123 to 123.5 of OBG Segment 13CW. ZPMC Welder is identified as 066734. ZPMC Quality Control (QC) is identified as Mr. Shi Lei. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2132-ESAB.

Shielded Metal Arc Welding (SMAW) welding of weld joint SEG3015U-004 located on vertical plate to edge plate at panel point 124 to 124.5 of OBG Segment 13CW. ZPMC Welder is identified as 066479. ZPMC Quality Control (QC) is identified as Mr. Shi Lei. The welding variables recorded by QC appeared to comply with the Applicable WPSB-P-2214-B-U2-FCM-1.

FCAW welding of weld joint SEG3015K-090, 091, 084, 085 located on I-Rib to Floor Beam at panel point 122.5 of OBG Segment 13CW. ZPMC Welder is identified as 066687. ZPMC Quality Control (QC) is identified as Mr. Shi Lei. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2133-ESAB.

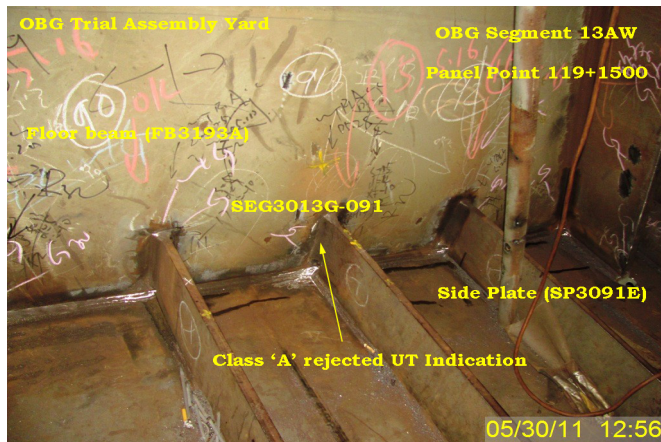
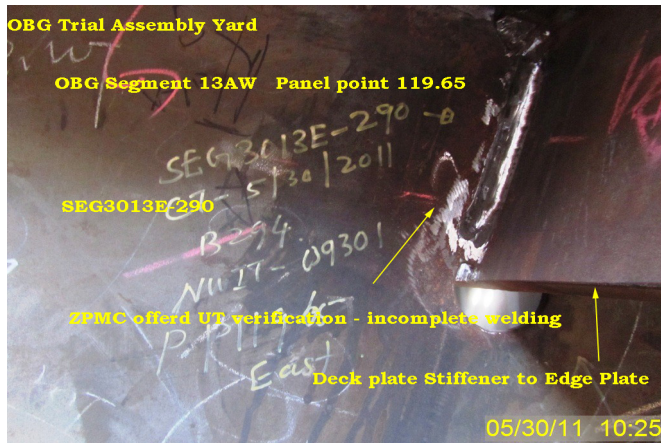
FCAW welding of weld joint SEG3014N-062, 063 located on side plate RS stiffener to Floor Beam at panel point 121 to 121.5 of OBG Segment 13BW. ZPMC Welder is identified as 045240. ZPMC Quality Control (QC) is identified as Mr. Shi Lei. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2132-ESAB.

This QA inspector observed ABF personnel performed Ultrasonic Testing (UT) D-Scanning on bottom plate to bottom plate splice joint of OBG Segment 13AW to 13BW. The weld number is identified as OBW13B-001.

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Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.



## Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact , who represents the Office of Structural Materials for your project.

**Inspected By:** Kumar,Vibin

Quality Assurance Inspector

**Reviewed By:** Patel,Hiranch

QA Reviewer